

## IN THE CLAIMS

### **Claims pending:**

- At time of the Action: 1-13, 41-50, 82-92, 98-101, and 103
- After this Response: 1-13, 41-50, 82-92, 98-101, and 103

**Currently Amended claims:** 1, 5, 41, 82, 85, 87, 89, 92, and 98

**Canceled or Withdrawn claims:** None.

This listing of claims replaces all prior versions and listings:

1. **(Currently Amended)** An architecture embodied on one or more computer-readable storage media, the architecture comprising:

a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet based; and

a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet-based,

wherein the table appearance manager and the spreadsheet functionality manager are architecturally separate system managers of the architecture.

2. **(Original)** The architecture of claim 1, wherein the document is a markup document.

3.     **(Previously Presented)** The architecture of claim 1, wherein the table appearance manager provides a formula edit box to permit the user to enter a formula into the cell or another cell of the table.

5           4.     **(Original)** The architecture of claim 1, wherein the table appearance manager comprises:

          a table component to support editing functionality of the table; and

          a spreadsheet component to receive data and formulas input into the table.

10           5.     **(Currently Amended)** The architecture of claim 1, wherein the spreadsheet functionality manager comprises:

          a cell table to maintain data values and formulas used in the table; and

          a format table to maintain formatting information used in the table, the formatting information comprising whether or not the cell is interpreted as  
15 ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet based.

          6.     **(Original)** The architecture of claim 1, wherein the spreadsheet functionality manager comprises:

          a cell table to maintain data values and formulas used in the table; and

20           a recalculation engine to recalculate the formulas following a change to a data value or formula in the cell table.

7.     **(Original)** The architecture of claim 1, wherein the spreadsheet functionality manager comprises:

a cell table to maintain data values and formulas used in the table;

a delay parser to parse input for the cell table as needed; and

5       a recalculation engine to recalculate the formulas following a change to a data value or formula in the cell table.

8.     **(Original)** The architecture of claim 1, wherein multiple tables appear in one or more documents, and the spreadsheet functionality manager is  
10    configured to maintain data and formulas for the multiple tables.

9.     **(Original)** The architecture of claim 1, wherein multiple tables appear in one or more documents, and the spreadsheet functionality manager is configured to track references made from one table to another table.  
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10.    **(Original)** The architecture of claim 1, wherein multiple tables appear in one or more documents, and the spreadsheet functionality manager is configured to maintain data and formulas for the multiple tables and track references made from one table to another table, the spreadsheet functionality  
20    being further configured to update any data and formulas in the multiple tables that is affected by a change made to one of the tables.

11. **(Original)** The architecture of claim 1, wherein multiple tables appear in one or more documents, and wherein:

the table appearance manager comprises multiple spreadsheet components so that there is one spreadsheet component for an associated table, each  
5 spreadsheet component being configured to capture data and formulas input into the associated table; and

the spreadsheet functionality manager comprises multiple grid components so that there is one grid component for an associated table and an associated spreadsheet component, each grid component maintaining the data, the formulas,  
10 and formatting used in the associated table.

12. **(Original)** The architecture of claim 1, further comprising a document renderer to render the document.

15 13. **(Original)** The architecture of claim 1, wherein the table appearance manager and the spreadsheet functionality manager reside on different computers.

14-40. **(Canceled).**

41. (Currently Amended) One or more computer-readable media comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

a table appearance manager to manage how a table appears in a document;

5 a spreadsheet functionality manager to manage spreadsheet functions for the table and to determine whether spreadsheet cells are ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based; and

first and second tables renderable as part of a common document, the first table having a first cell capable of being interpreted as ~~primarily~~ word-processing  
10 based or as ~~primarily~~ spreadsheet-based and the second table having a second cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based;

a first spreadsheet component to receive at least one of data or a first formula entered into the first cell in the first table;

15 a first grid component to hold the data or first formula in association with the first cell of the first table;

a second spreadsheet component to receive at least a second formula entered into a second cell in the second table, the second formula referencing the first cell in the first table; and

20 a second grid component to hold the second formula in association with the second cell of the second table,

wherein the table appearance manager and the spreadsheet functionality manager are architecturally separate system managers of the architecture.

42.    **(Previously Presented)** The one or more computer-readable media of claim 41, wherein the first table is nested within the second table.

43.    **(Previously Presented)** The one or more computer-readable media  
5   of claim 41, wherein the second spreadsheet component presents a formula edit box to allow user entry of the second formula.

44.    **(Previously Presented)** The one or more computer-readable media  
10   of claim 41, wherein the second spreadsheet component facilitates reference editing to the first cell in the first table.

45.    **(Previously Presented)** The one or more computer-readable media  
15   of claim 41, wherein the first table is nested within the second table and the second spreadsheet component facilitates reference editing to the first cell in the first table.

46.    **(Previously Presented)** The one or more computer-readable media  
20   of claim 41, further comprising a recalculation engine to recalculate the second formula held in the second grid component in response to a change of the first cell in the first grid component.

47.    **(Previously Presented)** The one or more computer-readable media of claim 46, wherein the second table is updated to reflect a result produced by the recalculation engine.

48.    **(Previously Presented)** The one or more computer-readable media of claim 46, wherein the first and second tables are updated to reflect a result produced by the recalculation engine.

5           49.    **(Previously Presented)** The one or more computer-readable media of claim 46, wherein the first table is nested within a particular cell of the second table, the particular cell containing a non-calculation formula that is not evaluated by the recalculation engine but which defines a dependency between the two cells.

10           50.    **(Previously Presented)** The one or more computer-readable media of claim 41, further comprising:

          a free floating field renderable in the document but separately from the first and second tables;

          a third spreadsheet component to receive a third formula entered into the  
15   free floating field; and

          a third grid component to hold the third formula.

51-81. **(Canceled)**.

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82. (Currently Amended) One or more computer-readable media comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

a table appearance manager to manage how a table appears in a document,  
5 the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based, the table further including one or more word-processing based cells and one or more spreadsheet-based cells; and

a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~  
10 word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet based,

15 wherein the table appearance manager and the spreadsheet functionality manager are architecturally separate system managers of the architecture, and

wherein the table appearance manager and the spreadsheet functionality manager are configured for:

creating a first spreadsheet table for display in a document; and

20 creating a second spreadsheet table for display in the document, the second spreadsheet table being nested within the first spreadsheet table when displayed.



83. **(Previously Presented)** A data structure stored on the one or more computer-readable media of claim 82, the data structure being produced as a result of operation of the table appearance manager and the spreadsheet functionality manager.

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84. **(Previously Presented)** A computer configured for execution of the one or more computer-readable media of claim 82.

85. (Currently Amended) One or more computer-readable media comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

5 a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based;

a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key  
10 typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet-based; and

15 wherein the table appearance manager and the spreadsheet functionality manager are configured for:

integrating text and a spreadsheet table within a common document, the spreadsheet table supporting spreadsheet functionality comprising an enter key typed into the cell as meaning a command to navigate to another cell;

20 formatting the text according to a particular format; and

formatting cells in the spreadsheet table according to the particular format.

86. **(Previously Presented)** A computer configured for execution of the one or more computer-readable media of claim 85.

87. **(Currently Amended)** One or more computer-readable media  
5 comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based;

10 a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to  
15 navigate to another cell in the event that the cell is

interpreted as ~~primarily~~ spreadsheet-based; and

wherein the table appearance manager and the spreadsheet functionality manager are configured for:

integrating text and a spreadsheet table within a common document,  
20 the spreadsheet table supporting spreadsheet functionality comprising treating an enter key typed into the cell as meaning a command to navigate to another cell; and

evaluating the text and the spreadsheet table concurrently for possible spelling or grammatical errors.

88. (Previously Presented) A computer configured for execution of the one or more computer-readable media of claim 87.

89. (Currently Amended) One or more computer-readable media  
5 comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based;

10 a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to  
15 navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet-based; and

wherein the table appearance manager and the spreadsheet functionality manager are configured for:

integrating text and a spreadsheet table within a common document,  
20 the spreadsheet table supporting spreadsheet functionality comprising treating an enter key typed into the cell as meaning a command to navigate to another cell;

enabling a user to select a control function to modify or evaluate an aspect of the document; and

applying the control function across both the text and the spreadsheet table.

5           90.   **(Previously Presented)** The one or more computer-readable media of claim 89, wherein the control function is selected from a group of functions including formatting, spell checking, grammar checking, find, find and replace, auto-correct, applying document themes, inserting lists, images, drawings, charts, hyperlinks, automatic detection of hyperlinks, and automatic detection of lists.

10           91.   **(Previously Presented)** The one or more computer-readable media of claim 89, wherein the control function is any text feature that can be applied to the text and the applying comprises applying that text feature to the spreadsheet table.

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92. (Currently Amended) One or more computer-readable media comprising computer-executable instructions for defining a computer architecture, wherein the computer architecture comprises:

5 a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based;

a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key  
10 typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet-based; and

wherein the table appearance manager and the spreadsheet functionality  
15 manager are configured for:

integrating text and a first spreadsheet table within a common document, the spreadsheet table supporting spreadsheet functionality comprising treating an enter key typed into the cell as meaning a command to navigate to another cell;

20 creating a second spreadsheet table by cutting or copying all or part of the first spreadsheet table and pasting said all or part of the first spreadsheet table; and

updating any references to cells in the first spreadsheet table or the second spreadsheet table to reflect the newly created second spreadsheet table.

93-97. (Canceled).

98. (Currently Amended) A computer comprising:

a memory;

5 a processing unit coupled to the memory; and

an architecture stored in the memory and executable on the processing unit to construct and display a document having a table with integrated spreadsheet functionality, the architecture comprising:

10 a table appearance manager to manage how a table appears in a document, the table having a cell capable of being interpreted as ~~primarily~~ word-processing based or as ~~primarily~~ spreadsheet-based; and

15 a spreadsheet functionality manager to manage spreadsheet functions for the table, the functions comprising: determining whether the cell is ~~primarily~~ word-processing based or ~~primarily~~ spreadsheet-based and treating an enter key typed into the cell as meaning a return command in the event that the cell is interpreted as ~~primarily~~ word-processing based or as meaning a command to navigate to another cell in the event that the cell is interpreted as ~~primarily~~ spreadsheet-based,

20 wherein the table appearance manager and the spreadsheet functionality manager are architecturally separate system managers of the architecture.

99. (Original) A computer as recited in claim 98, wherein the architecture constructs multiple tables within the document, at least one table containing a reference to contents in another table.

100. **(Original)** A computer as recited in claim 98, wherein the architecture constructs multiple tables within the document, the tables containing formulas referencing contents of other tables, whereupon modification of content in one of the tables, the architecture automatically recalculates all formulas in the  
5 tables in the document.

101. **(Original)** A computer as recited in claim 98, wherein the architecture constructs a free floating field in the document, the free floating field containing a formula referencing content in the table, whereupon modification of  
10 content in the table, the architecture automatically recalculates the formulas in the free floating field.

102. **(Canceled).**

15 103. **(Original)** A computer as recited in claim 98, wherein the architecture comprises a complementary pair of spreadsheet and grid objects for the table, the spreadsheet object facilitating user entry of content into the table and the grid object holding the content for the table.

20 104-105. **(Canceled).**